REMARKS

I. STATUS OF THE CLAIMS

A Notice of Non-Compliant Amendment (37 CFR 1.121) was mailed on January 23, 2007, and indicated that a complete listing of the claims is not present.

In response to the Office Action mailed May 24, 2004, the Applicants elected claims 1-5 of Group 1, and cancelled the non-elected claims 6-17. In the Amendment filed November 17, 2005, the Applicants mistakenly added new claims 6-8, whereas these claims should have been numbered as claims 18-20.

An Amendment was filed on November 28, 2006, in which amendments were made to claims 6-8. New claims 18-20 of the present Amendment correspond to claims 6-8 as shown in the Amendment filed on November 28, 2006.

Therefore, a complete listing of the claims is included herein.

Claims 1-5, and 18-20 are pending in this application.

II. IDS

An IDS was filed on July 23, 2003. The IDS is listed within PAIR. The Examiner is respectfully requested to acknowledge receipt of the IDS.

III. REJECTION OF CLAIMS 1-5 UNDER 35 U.S.C. 102(E) AS BEING ANTICIPATED BY SAULSBURY

Claim 1 has been amended. Support for the amendment to claim 1 can be found in at least page 20, line 34 to page 21, line 8; page 21, line 24 to page 25, line 13; and page 22, line 7 to page 24, line 11.

Saulsbury is directed to task switching (context switching). When task switching from a first task to a second task, the following operations occur: (1) operands (register values) of the first task are evacuated to a memory; and, then, (2) the operands of the second task are restored from the memory to the registers. See Saulsbury, column 2, line 40 to column 3, line 29. Saulsbury reduces the overhead associated with operation (1) indicated above. This is

done by using dirty bit registers that identify the registers that are updated by the current task (first task). See Saulsbury, column 2, line 65 to column 3, line 15.

When the current task (first task) in Saulsbury needs to be evacuated, only those registers, which are marked by the dirty bits as having been updated by the current task, are evacuated. See Saulsbury, column 3, lines 30-33. With this arrangement, the amount of data **evacuated** by operation (1) that evacuates contexts of the first task is small if the dirty bits indicate only a small number of used registers. Although Saulsbury describes potentially reducing the amount of data evacuated as related to operation (1) indicated above, the Applicant's have been unable to find a description within Saulsbury which relates to reducing the amount of information that is **restored** as related to operation (2) described above.

Currently amended claim 1 of the present application recites a first part of information necessary for execution of the second program is restored from the memory to a first area of the hardware resources when task switching from the first task to the second task is performed. Further, the first area is marked as a usable area while other areas are marked as unusable areas. When the execution of the second program needs to use an area that has been marked as an unusable area, a second part of information necessary for execution of the second program is restored from the memory to the second area of the hardware resources.

The dirty bits as taught by Saulsbury have a different purpose than the markings recited in the claimed invention of currently amended claim 1. Namely, the dirty bits of Saulsbury indicate which of the registers store operands that are to be saved to the main memory at the next context switch. See Saulsbury, column 3, lines 30-33. Accordingly, the dirty bits of Saulsbury relate to an **evacuation** operation, instead of a **restoration** operation. Thus, the amount of data restored by operation (2) in restoring contexts of the second task is not necessarily kept to a minimum in Saulsbury.

In summary, Saulsbury is silent about reducing the amount of data that is restored from the memory to the registers, and only describes how to reduce the amount of data that is evacuated from the registers to the memory.

Accordingly, Saulsbury neither describes nor suggests a restoration unit that is configured to restore, from the memory to the first area, a first part of information necessary for execution of the second program, to mark the first area as a usable area while marking areas other than the first area as unusable areas, to restore, from the memory to a second area, a second part of the information necessary for execution of the second program if execution of the

second program needs to use an area that is marked as an unusable area as recited in currently amended claim 1 of the present application.

The above comments are specifically directed to claim 1. However, it is respectfully submitted that the comments would be helpful in understanding various differences of various other claims over the cited reference.

In view of the above, it is respectfully submitted that the rejection is overcome.

IV. REJECTION OF CLAIMS 6-7 UNDER 35 U.S.C. § 102(E) AS BEING UNPATENTABLE OVER GOTTLIEB (U.S. PATENT NO. 6,298,431)

Gottlieb relates to a banked shadowed register file. More specifically, the Applicant's are unable to find within Gottlieb a teaching which describes a restoration unit configured to restore, from the memory to the first area, a first part of information necessary for execution of the second program, to mark the first area as a usable area while marking areas other than the first area as unusable areas, to restore, from the memory to a second area, a second part of the information necessary for execution of the second program if execution of the second program needs to use an area that is marked as an unusable area, and to restore the evacuated information to the first area based on the identification information when the second program comes to a halt or to an end as recited in claim 18 of the present application.

Gottlieb merely describes a banked shadowed register file 30, which is capable of storing a plurality of inactive threads such that multiple thread switch operations can be performed on the microprocessor 12. See column 3, lines 40-44. The Applicant's respectfully submit that the aforementioned recitation to claim 18 distinguishes over Gottlieb.

The above comments are specifically directed to claim 18. However, it is respectfully submitted that the comments would be helpful in understanding various differences of various other claims over the cited reference.

In view of the above, it is respectfully submitted that the rejection is overcome.

V. REJECTION OF CLAIM 8 UNDER 35 U.S.C. § 103(A) ACCORDING TO GOTTLIEB IN VIEW OF HANDY (PAGES 62-64)

The comments in section IV for distinguishing over Gottlieb are equally applicable here.

In view of the above, it is respectfully submitted that the rejection is overcome.

VI. CONCLUSION

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 1-31-07

By: _____
Joseph W. Iskra
Registration No. 57,485

1201 New York Ave, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501